Department of the Air Force PFAS Snapshot

Per- and polyfluoroalkyl substances (PFAS) are a group of synthetic fluorinated chemicals. Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA) are two organic chemicals within the PFAS group that were used in industrial and consumer products such as nonstick cookware, stain-resistant fabric and carpet, some food packaging and specialized foam. PFOS and PFOA are the only two compounds of the PFAS group with established Environmental Protection Agency health advisories for drinking water.

In 1970, the Department of the Air Force (DAF) began using the firefighting agent Aqueous Film Forming Foam (AFFF) which contained PFOS and PFOA. AFFF is the most efficient extinguishing method for petroleum-based fires and is widely used across the firefighting industry, to include all commercial airports, to protect people and property. On May 19, 2016, the EPA established a lifetime Health Advisory or HA level of 70 parts per trillion for PFOS and/or PFOA in drinking water. The EPA HAs are non-regulatory and not enforceable; however, under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), DAF uses it to determine an action level for PFOS/PFOA in drinking water. The illustration depicts DAF progress through the CERCLA process.

204 Installations Require Preliminary Assessments (PAs)*

99% of PAS complete

Of those 204, 191 Installations Planning a Site Inspection (SI)

41% of SIS ACTIVE/Reserve: 36 of 86 SIs complete Complete

BRAC: 30 of 30 SIs complete

ANG: 12 of 75 SIs complete

Of those, 190 Installations Planning a Remedial Investigation (RI)

39% of RIS ACTIVE/Reserve: 48 RIs awarded: 1(FY19) 29(FY20) 18(FY21)

BRAC: 12 RIs awarded: 1(FY19) 4(FY20) 7(FY21)

ANG: 15 RIs awarded: 1(FY16) 1(FY19) 10(FY20) 3(FY21)

Castle

March

Mather

Pease

Reese

K.I. Sawyer

Plattsburgh

Wurtsmith

*JB Anacostia-Bolling transferred from Navy to AF Active/Reserve; still in the PA phase

IDFNTIFY

39 **BRAC**

90 Active/Reserve

75 **ANG**

30 **BRAC**

86 Active/Reserve

75 **ANG**

30 **BRAC**

85 Active/Reserve

ANG

Barnes

75 **ANG**

RESPOND

Air Force Drinking Water **Response Actions:**



- Point-of-use filtration
- Whole-house filtration
- Municipal Water Supply hookup
- **Municipal Water Treatment**
- New well drilling

BRAC ACTIVE/RESERVE

Cannon Dover Eielson Ellsworth Fairchild Goodfellow Homestead **Hurlburt Field**

JBER-Fort Yukon Tinker

Little Rock Luke McConnell Mountain Home Martinsburg **New Boston** Peterson Scott Shaw

Gabreski Montana Morris Otis/JB Cape Cod Toledo

Biddle (formerly Horsham)

JBSA Randolph Wright-Patterson VENT

176/176

Installations

Installations transitioned to new C6 AFFF in stockpiles and fire trucks

\$5.3M

Cost for ecologic system kits for fire vehicles

100%

Installations finished retrofitting vehicles with ecologic system kits

979,000 \$10.8M

JBMDL

Gallons of legacy AFFF disposed

Cost to date to replace and dispose of legacy AFFF in stockpiles and fire trucks

Travis

\$822M

total force expenditures

PFAS Actions to Date

investigations | response actions | prevention

Installations Status Update

Active/Reserve Installations

Cannon AFB, NM: 3 off-base drinking water sources above EPA HA; BWP,FSI at 2. Engineering Evaluation/Cost Analysis – Pilot Study Project began May '21

Dover AFB, DE: 9 off-base private wells above EPA HA; FSI at 9, BWP to 1, sampling ECD July '23

Eielson AFB, AK: GAC system installed at on-base water treatment plant. 173 off-base private wells above EPA HA; 178 water systems installed, BWP to 3 residences. AF signed interim ROD. Cooperative agreement signed with City of North Pole to connect residents to municipal water. Construction began April '20

Ellsworth AFB, SD: 27 off-base residential wells serving 94 residences above EPA HA; 2 residences (1 well) connected to base water supply, 4 residences (3 wells) connected to city water; FSI at 20 residences (17 wells), 1 ion exchange system installed at a mobile home park, BWP to 4 residences (4 wells), sampling completed

Fairchild AFB, WA: 2 municipal wells above EPA HA; FSI and 1 well in non-active. 97 off-base residential wells above EPA HA; 81 FSI, 6 residences connected to city water, BWP to 16 residences

Goodfellow AFB,TX:22 residential wells above EPA HA, BWP sampling ECD Nov 21 Homestead ARB, FL: 3 off-base private wells above EPA HA; BWP; POETS installation in-process; sampling completed

Hurlburt Field, FL: 1 well above EPA HA; BWP, sampling ECD Dec '21

JBER-Fort Yukon LRRS, AK: 1 on-base well above EPA HA, BWP, filtration system

JB McGuire-Dix-Lakehurst, NJ: 2 on-base wells above EPA HA; FSI. Treatment system under construction for new public water system. 6 off-base wells above EPA HA; 2 FSI, 3 BWP, 1 connected to municipal water; municipal water connection under design for permanent solution

JBSA Randolph,TX:4 residential wells above EPA HA;BWP; sampling ECD Dec '21 Little Rock AFB, AR: 4 off-base residential wells above EPA HA, BWP; sampling completed

Luke AFB, AZ: 3 off-base residential wells above EPA HA; BWP. 3 public utility wells and 2 distribution points above EPA HA; FSI and community of \sim 1,630 residences transitioning off BW over the next month. Hot-tap hookup or POETS being explored for the 3 residential wells; sampling completed

McConnell AFB, KS: 3 residential wells above EPA HA; 1 location connected to municipal water supply; BWP; sampling completed

Mountain Home AFB, ID: 2 on-base drinking water wells above EPA HA; one well taken offline and replaced by another well below EPA HA; second well decommissioned and facility connected to base drinking water supply system below EPA HA. Off-base sampling completed

New Boston SFS, NH: 1 on-base drinking water well above EPA HA; FSI

Peterson AFB, CO: 39 municipal wells with FSI, 21 private wells with FSI (servicing 30 residences), 2 private wells with FSI at a mobile home park, 2 private wells connected to city and BWP at one 1 private well; sampling completed

Scott AFB, IL: One off-base residential well above EPA HA; FSI; confirmation of results indicate sampling completed

Shaw AFB, SC: 3 public water systems, 3 business and 31 residential wells above EPA HA, BWP to 229 residences and 3 businesses; sampling ECD Mar '24

Tinker AFB,OK:6 off-base private wells above EPA HA; BWP; sampling ECD Sept'21

Travis AFB, CA: 3 off-base residential wells above EPA HA; FSI and BWP. Sampling results indicate PFAS levels now below EPA HA. Bottled water will be discontinued once well owners are contacted next month. Sampling completed

Wright-Patterson AFB, OH: 2 on-base wells above EPA HA, GAC system installed

BRAC Installations

Former Castle AFB, CA: 3 private wells above EPA HA, FSI at 3 Former K.I. Sawyer AFB, MI: 1 private well above EPA HA; FSI

Former March AFB, CA: 1 public well above EPA HA; treatment system on-line, cooperative agreement in place. 2 private wells above EPA HA; connected to public water supply

Former Mather AFB, CA: 2 public wells above EPA HA; Cooperative agreement in progress to fund operation and maintenance of treatment system of one well. Existing alternate well used for replacement of the other public well

Former Pease AFB, NH: 2 public wells above EPA HA; 1 shut off, 1 treatment system on line, cooperative agreement in place. 5 private wells above EPA HA, 2 connected to public water supply, 2 FSI, 1 BWP Former Plattsburgh AFB, NY: 4 private wells above EPA HA; FSI at 3, 1 with BWP

Former Reese AFB, TX: 242 private wells and 2 public wells above the EPA HA and/or Texas Protective Concentration Limits; 1 public well replaced by connection to City of Lubbock supply, FSI at 234, remaining BWP

Former Wurtsmith AFB, MI: 1 private well above EPA HA; connected to public water supply

ANG Installations

Barnes ANGB, MA: 2 municipal wells above EPA HA; wells taken offline while permanent treatment being installed

Biddle ANGB (Formerly Horsham), PA: Under Administrative Order. 2 on-base drinking water wells above EPA HA; temporary carbon filtration installed and BWP. 63 off-base private wells and 5 municipal wells above EPA HA. Providing alternate water sources to surrounding townships while carbon filtration systems are constructed

Gabreski ANGB, NY: County wells above EPA HA; all residential wells hooked up to municipal water

Martinsburg ANGB, WV: 1 municipal well above EPA HA. GAC system installed and functioning since December '17

Montana ANGB, MT: 1 drinking water well above EPA HA; BWP Morris ANGB, AZ: 3 off-base residential wells above EPA HA; BWP to 2, 1 residence unoccupied

Otis ANGB (JB Cape Cod), MA: Based on EPA HA: 3 residential wells above EPA HA, BWP to 1, FSI at 3, 108 municipal water connections. Wellhead treatment on 1 municipal well began operation 14 Feb 2020. Routine sampling of 45 private wells; no ECD at this time due to ongoing RI. Based on Massachusetts MCLs: 3 additional public water wells (all shut down) and 9 private wells impacted. MassDEP BWP

Toledo ANGB, OH: 1 off-base residential well above EPA HA; residence connected to municipal water supply; well closed

Non-AF led Drinking Water Responses

Barnes ANGB, MA: 3 residential wells above EPA HA; FSI by state Harrisburg IAP, PA: Municipal supplier delivered water with elevated PFOS in 2014; the supplier responded to the problem and conducted periodic monitoring. The current wells utilized and drinking water are currently below the EPA HA

Joe Foss Field, SD: 10 municipal wells above EPA HA; alternate water supply provided by other municipal wells

Luke AFB, AZ: 2 off-base utility wells above EPA HA; FSI

New Castle ANG, DE: 14 municipal wells above EPA HA; all have carbon treatment installed

Stewart ANGB, NY: City of Newburgh drinking water reservoir above EPA HA; alternate water provided through New York State aqueduct. State-funded public drinking water treatment system constructed for reservoir, but not operating as a drinking water source